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Apr-29-09

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**REGION 4** ATLANTA FEDERAL CENTER 61 FORSYTH STREET ATLANTA, GEORGIA 30303-8960

APR 2 8 2009

Colonel Dana R. Hurst District Engineer U.S. Army Corps of Engineers, Huntington District 502 Eighth Street Huntington, West Virginia 25701

> Re: DA Permit No. 2004-1400; Central Appalachia Mining, LLC Pre-Construction Notification and Compensatory Mitigation Plan KYDNR Permit No. 898-0610 Big Branch Surface Mine - Pike County, KY

#### Dear Colonel Hurst:

I am writing to inform you that the U.S. Environmental Protection Agency (EPA) is initiating review, under Section 404(c) of the Clean Water Act, of the proposed Big Branch Surface Mine in Pike County, Kentucky (Big Branch Mine). EPA is taking this step because we are concerned the recommended project plan could result in unacceptable adverse effects on the aquatic ecosystem, particularly to water quality and fish and wildlife resources. This letter notifies you that, pursuant to 40 CFR §231.3(a), EPA intends to issue a public notice of a proposed determination to restrict or prohibit the discharge of dredged or fill material at the Big Branch Mine, Pike County, Kentucky, project site.

EPA has expressed its longstanding concerns about this project because it would impact aquatic ecosystems on a large scale, affecting approximately 22,233 linear feet of waters of the United States. We formally shared these concerns in our letters dated July 22, 2005, August 16, 2005, and December 21, 2007, during the review of the 404 permit application. More recently, in a letter dated March 23, 2009, EPA stated that we have significant concerns regarding the proposed project, including the magnitude of the anticipated stream impacts, compliance with the Section 404(b)(1) Guidelines, and uncertainties with the proposed mitigation plans.

With the District's assistance, we had recently begun discussions with the mine operator to clarify remaining EPA concerns and options the company might reasonably pursue to address those concerns. At the April 16 meeting in Kentucky, there was a commitment to proceed with additional conversations. We now understand the company has informed the Corps that they are not prepared to participate in additional conversations about this project with EPA. As a result, EPA needs to begin this 404(c) review to complete the environmental assessment of the proposed mine.

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environment.

EPA is initiating this 404(c) action based on the record to date and our assessment that efforts to avoid and minimize impacts to aquatic resources have not yet been exhausted and, as a result, the project may cause or contribute to significant degradation of the aquatic environment, including impacts to fish and wildlife. Specific concerns include the cumulative impacts of this project on the watershed, considering both the direct fill of natural stream channels and the indirect effects of such fill activities on downstream water quality across the watershed, and inadequate avoidance and minimization of impacts to aquatic resources of national importance (ARNI). EPA feels that additional measures may be available to reduce the impact of this proposal, and that all alternatives should be exhausted to ensure that this proposal does not result in an unacceptable adverse impact, either individually or cumulatively, on the aquatic

EPA's regulations on Section 404(c) procedures provide for further coordination between EPA, the Corps of Engineers and the applicant, Central Appalachia Mining, LLC. Consistent with EPA regulations at 40 CFR §231.3(a)(2), EPA is providing the Corps and Central Appalachia Mining with an opportunity to submit any additional information for the record to demonstrate that no unacceptable adverse impacts would occur from this project, or that corrective action will be taken satisfactory to EPA to prevent such adverse effects. EPA is available to meet with you and the permit applicant during the next 15 days to discuss options for further reducing adverse environmental impacts associated with the proposed project. We encourage you to contact us to schedule a discussion as soon as possible.

I appreciate your prompt attention to this matter. If you have any questions or wish to arrange a meeting to discuss potential project modifications to reduce unacceptable adverse impacts, please contact me at 404-562-8357 or Jim Giattina, EPA Region 4 Director of the Water Protection Division, at 404-562-9470.

Sincerely,

A. Stanley Meiburg

Acting Regional Administrator

s. Stt Gl

ce: Central Appalachia Mining, LLC
Michael H. Shapiro
Acting Assistant Administrator
Office of Water, EPA



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ATLANTA, GEORGIA 30303-8960

MAY 1 3 2009

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is in follow-up to phone discussion between yourself and Mr. Todd Bowers, of my staff, on May 7, 2009 regarding timeframes for providing additional information to EPA in response to our April 28, 2009, Clean Water Act (CWA) Section 404 (c) letter on the Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0610). In that conversation, you indicated the company's willingness to meet with EPA to provide additional information and, perhaps, corrective action, the company believes will address EPA's concerns regarding the potential for unacceptable adverse effects arising from the proposal. You also indicated, during this conversation, that CAM needed more time to prepare additional information to provide to EPA. Pursuant to the phone discussion of May 7, I have determined that CAM has provided EPA with notice of the company's intent to take corrective action consistent with the regulations governing section 404(c). In order to facilitate further discussions with the CAM, EPA is granting a 30 day extension to CAM to provide additional information pertinent to EPA's evaluation under Section 404(c).

The 15-day time period indicated in our letter of April 28, is intended to give the applicant an initial and expeditious opportunity to provide very specific information regarding the proposed project that may not already be contained in the record. Under the regulations, if EPA decides to proceed to the next stage in the process, we will engage further with the applicant, the Army Corps of Engineers, and the public in our Section 404 (c) review of the project. Specifically, the regulations contemplate a formal public comment period, as well as the opportunity for a public hearing.

In balancing our regulatory responsibility to respect the timeframes set out in the regulations with your company's understandable need for more time to provide additional information, we have determined that extending the timeframe for your response for an additional 30 days is appropriate. We also believe that such an extension of time is appropriate in consideration of your request for the opportunity to meet with EPA. This timeframe will allow for both organizations to fully consider and discuss any new information you would like to share with EPA.

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you to discuss our concerns, and if you should have any

questions, please contact Jim Giattina, EPA Region 4 Director of the Water Protection Division, at (404) 562-9345, or call me at (404) 562-8357.

A. Stanley Meiburg Acting Regional Administrator

Cc: Colonel Dana R. Hurst, District Engineer **Huntington District** U.S. Army Corps of Engineers Huntington, West Virginia 25701-2070



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JUN 1 2 2009

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is provided to Central Appalachia Mining, LLC (CAM) as a follow-up to the previous letter dated May 13, 2009, concerning the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0610) in Pike County, Kentucky. The previous correspondence sent by my staff allowed CAM a 30-day extension intended to allow the company time to provide additional information and address concerns raised by the U.S. Environmental Protection Agency (EPA) in the Clean Water Act (CWA) Section 404(c) letter dated April 28, 2009. You have previously indicated that CAM is willing to meet with EPA and discuss corrective actions that will address EPA's concerns regarding the potential for unacceptable adverse effects to aquatic resources arising from the proposal.

Since our last correspondence, CAM has provided EPA with additional information and EPA has conducted field studies to independently verify site conditions and jurisdictional determinations within the proposed project boundaries. On June 2 and 3, 2009, a 10-person team led by EPA regional personnel, spent time on-site in Pike County to fully assess the condition of the aquatic resources that will be affected by the proposed project. Additionally, EPA has conducted a thorough review of the Big Branch mining plan, specifically the volume and placement of fill material within the project boundaries. As we noted during our June 11, 2009, conference call with you and the U.S. Army Corps of Engineers – Huntington District representatives, we will provide detailed reports of EPA's findings to CAM and the Corps upon their completion no later than July 6, 2009.

Therefore, to balance our regulatory responsibility with respect to the timeframes set out in the regulations with the need to fully consider and discuss the new information brought about by our recent project site visit, the information you provided to us, our discussions on June 11, 2009, and the analysis of the mining plan, we have determined that extending the timeframe, in accordance with 40 CFR Part 231, for twenty (20) days beyond July 6 to July 27, 2009, is appropriate. In addition, we will be contacting you to set up a meeting, here in Atlanta, to further discuss the corrective actions needed to address our concerns once you have had an opportunity to review the final reports, but no later than July 21, 2009.

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you to discuss our findings and concerns. If you should have any questions, please contact Tom Welborn, EPA Region 4 Branch Chief of the Wetlands, Coastal and Oceans Branch, at (404) 562-9354.

Sincerely,

A. Stanley Meiburg

Acting Regional Administrator

cc: Colonel Dana R. Hurst, District EngineerHuntington DistrictU.S. Army Corps of EngineersHuntington, West Virginia 25701-2070



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ATLANTA, GEORGIA 30303-8960

JUL 27 2009

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is a follow-up to our previous letter dated June 12, 2009, concerning the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0792) in Pike County, Kentucky. The previous correspondence notified Central Appalachia Mining (CAM) of a 20-day extension beyond July 6, 2009, to allow the Environmental Protection Agency (EPA) time to balance its regulatory responsibility with the need to fully consider the findings of our site visit on June 2-3, 2009. You have previously indicated that CAM is willing to meet with EPA, provide additional information, and discuss possible corrective actions that the company believes will address EPA's concerns regarding the potential for unacceptable adverse effects to aquatic resources arising from the proposed project.

EPA is continuing to analyze information about the project, compile final reports from our site visit, and conduct quality assurance reviews of the information collected. We will complete our analysis and provide the results of our findings to you no later than August 14th. We would also like to set up a meeting, here in Atlanta, no later than August 21, 2009, to discuss the findings with you.

We appreciate your cooperation during this process and look forward to the opportunity to meet with you to discuss our findings and concerns. If you should have any questions, please contact Tom Welborn, EPA Region 4 Branch Chief of the Wetlands, Coastal, and Ocean Branch, at (404) 562-9354.

Sincerely,

A. Stanley Meiburg

Acting Regional Administrator

cc: Colonel Dana R. Hurst, District Engineer
 Huntington District
 U.S. Army Corps of Engineers
 Huntington, West Virginia 25701-2070



August 31, 2009

Mr. James Giattina, Director Water Protection Division, Region 4 United States Environmental Protection Agency Atlanta Federal Center 61 Forsyth Street Atlanta, Georgia 30303-8960

Re: CAM Mining LLC

Big Branch Permit No. 898-0610

**EPA Final Reports** 

Mr. Giattina:

This letter is in response to your August 14, 2009 correspondence and conservations with members of your staff related to the three EPA reports on Central Appalachian Mining, Big Branch Permit No. 898-0610.

CAM Mining and our consulting company have initially reviewed the three EPA reports. After the initial review, CAM is requesting additional time to better understand the differences in the methods and stream classifications as outlined in the North Carolina Division of Water Quality's Identification Methods. The North Carolina method is an unrecognized protocol by our consulting companies and is new for it's use for the Appalachian Region. Due to this fact, CAM desires to compare the current standard USACE protocol to the North Carolina method since the outcome reclassifies many of the stream segments as perennial versus the long standing USACE determination as intermittent and ephemeral. We also need to understand the impact to the results of the North Carolina study taking into consideration the timing of the field work and the non typical major precipitation events throughout the year. It would be of interest to CAM to solicit the professional opinions of the Huntington USACE as it relates to utilizing this new protocol since they have been the agency regulating the stream determinations for many years.

The second item of review was the Morgan Worldwide Report dated August 14, 2009 dealing with the minimization of stream impacts. I felt the study was somewhat vague and was hard to compare the Morgan data to the previous submitted data due to the difference in the method used

by Morgan in the calculation of the fill volumes versus the backfill volumes. Also, it appears that the Morgan study does not address the need to balance the locations of the fill volumes with the locations of the mining areas. The Morgan plan would require the development of major haul roads from the western reserve area to the eastern fill locations which will delay contemporaneous reclamation activities and will have a significant affect on the "reasonable" economics of the project.

Upon the request by Morgan, CAM had supplied digital topography and grid files to assist Morgan in their analysis. At this time, CAM requests the same considerations from Morgan for our review. CAM requires the fill designs and final topography in digital form to have the ability to compare the original designs to the Morgan Design. On page 8 of the Morgan Report it states that a "re-design could be necessary to ensure that the actual fills needed for the mine plan are in the correct place relating to the mining sequence". This statement leads me to believe that the Morgan Study is not a final analysis or recommendation, but opens the doors to a continuation of a "what-if" type of analysis.

CAM requests additional time to review the reports and requests the additional mapping and digital data which was utilized in Morgan's analysis. CAM desires to move this project forward, but does not foresee having a productive meeting with the EPA until the additional review and analysis of the requested information is completed. CAM has cooperated with the USACE and EPA over a long period of review and believes that during this process, the current submitted modified plan for Big Branch meets the required regulatory standards.

I would like to submit a written response expressing CAM's view of the EPA reports prior to initiating a meeting in Atlanta. Once this additional step is completed, we look forward to meeting with the EPA to finalize the permit.

Sincerely,

Ronald G. Hull, P.E.

Royled H. Hull

General Manager of Engineering and Planning

**CAM Mining LLC** 



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Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

September 24, 2009

Dear Mr. Hull:

This letter is provided to Central Appalachia Mining, LLC (CAM) in response to your letter dated August 31, 2009, concerning the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0610) in Pike County, Kentucky. In your letter, you requested an extension of time to allow the company time to finalize its review of the reports that the Environmental Protection Agency (EPA), Region 4, had provided in connection with the Clean Water Act Section 404(c) review that is being conducted. Also, you had requested additional information from Morgan Worldwide that was used in the development of the report on avoiding and minimizing stream impacts.

EPA and Morgan Worldwide provided a web link to the information that was used in the development of their report on September 5, 2009, in an email to you. Please let us know if additional information is needed for your review of this report. You indicated that CAM will be developing a written report prior to the meeting with EPA in Atlanta. In order to expedite the scheduling of the meeting, and to give CAM additional time to complete its review of our reports, I have listed several dates that either Mr. Stan Meiburg or I will be available for a meeting with CAM in order to review your response and move forward with a decision on mining at the Big Branch site.

Date/Time Options:

Monday, November 2, 2009 at 1 pm to 4 pm Monday, November 9, 2009 at 1 pm to 4 pm

Friday, November 13, 2009 at 1 pm to 4 pm

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you to discuss our findings and concerns. If you have any questions, please contact Tom Welborn, EPA Region 4 Wetlands, Coastal and Oceans Branch, at (404) 562-9354, or call me at (404) 562-9470.

Sincerely,

James D. Giattina

Director

Water Protection Division

cc: Colonel Dana R. Hurst, District Engineer



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ATLANTA, GEORGIA 30303-8960

October 29, 2009

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is provided to Central Appalachia Mining, LLC (CAM) as a follow up to our last letter dated September 24, 2009, and a phone conversation with Todd Bowers dated October 5, 2009, concerning the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0610) in Pike County, Kentucky. In our letter, we provided date and time options for CAM to meet with the Environmental Protection Agency (EPA) in our regional headquarters office in Atlanta, Georgia. During the aforementioned phone conversation, you requested a meeting date of either November 9 or 13, 2009, as well as a list of potential attendees to the meeting. We have, therefore, concluded that a meeting will take place on Monday, November 9, 2009, at 1 p.m. to 4 p.m. The list of attendees for this meeting is enclosed. The meeting agenda will include but not be limited to discussion and overview of the 404(c) process, a brief presentation by John Morgan of his findings, a brief presentation by the EPA Science and Ecosystem Support Division of their findings, a response and findings from CAM, and a discussion of next steps.

EPA and Morgan Worldwide provided a web link to the information that was used to develop their report on September 5, 2009, in an e-mail to you. Please let us know if you require more information for your review of this report. You indicated that CAM would develop a written report prior to the meeting with EPA in Atlanta outlining the company's position. In order for EPA Region 4 staff to review your written report, please provide it to our office via e-mail or fax before November 2, 2009, to allow for sufficient review time before our meeting on November 9, 2009.

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you to discuss our findings and concerns. If you have any questions, please contact Tom Welborn, EPA Region 4 Wetlands, Coastal and Oceans Branch, at (404) 562-9354, or call me at (404) 562-9470.

Sincerely,

rames D. Giattina

Director )
Water Protection Division

Enclosure

cc: Colonel Dana R. Hurst, District Engineer

cc: John Morgan, Morgan Worldwide Consultants

## **Enclosure**

List of Attendees for Meeting at EPA Regional Headquarters Atlanta GA on November 9, 2009

Stanley Meiburg Acting EPA Regional Administrator, Region 4
James Giattina Director, Water Protection Division, Region 4

Tom Welborn Branch Chief, Wetlands, Coastal, and Oceans Branch

Duncan Powell Deputy Branch Chief, Wetlands, Coastal and Oceans Branch
Todd Bowers Project Manager, Wetlands and Marine Regulatory Section
Lonnie Dorn Project Scientist, Science and Ecosystem Support Division

Philip Mancusi-Ungaro Office of Water, Legal Support, Region 4

John Morgan Mining Engineer, Morgan Worldwide Consultants
Ginger Mullins (invited) Regulatory Branch Chief, USACE Huntington District

Mark Taylor (invited) USACE Huntington District
Teresa Spagna (invited) USACE Huntington District

Ann Campbell (invited) Office of Wetlands, Oceans and Watersheds, EPA Headquarters

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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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November 20, 2009

Mr. Ron Hull Central Appalachian Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

The U.S. Environmental Protection Agency (EPA) Region 4 wishes to thank you and representatives of Central Appalachian Mining (CAM) for meeting with us on November 9, 2009, to discuss the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0610) in Pike County, Kentucky. The discussion we had was very beneficial for both of us as we continue to review options to the proposed project. Input from the U.S. Army Corps of Engineers and John Morgan proved valuable as we continue to search for the best possible solution to CAM meeting its needs for a viable mining project and the EPA's requirements to ensure water quality standards and minimal impacts to the aquatic resource are achieved.

As discussed during the close of the November 9 meeting, EPA and CAM desire to meet again at a suitable time to further discuss next steps in moving forward with the proposed project. The week of December 7 was offered as the earliest potential date for another face-to-face meeting with a location yet to be determined. Please notify us when CAM would be available so we may make arrangements in a timely manner. Attendance by members of the Huntington Corps district and John Morgan are anticipated at the next meeting as well.

You previously indicated that CAM would develop a written report prior to the November 9 meeting with EPA in Atlanta outlining the company's position. If you still wish to submit a written response to reports provided by EPA and Morgan Worldwide Consultants, please provide it to our office by November 30, 2009, to allow for sufficient review time before our proposed meeting in December 2009.

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you again to discuss our concerns with the proposed project. I believe that moving forward in a timely manner is of utmost concern to all parties involved. If you have any questions, please contact Tom Welborn, EPA Region 4 Wetlands, Coastal and Oceans Branch, at (404) 562-9354, or call me at (404) 562-9470.

Sincerely,

Tames D. Giattina

Water Protection Division



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December 16, 2009

Mr. Ron Hull, LLC 265 Hambley Blvd. Pikeville, Kentucky 41501

The purpose of this letter is to follow up to our December 9, 2009, meeting in Frankfort, Kentucky. The Environmental Protection Agency (EPA) appreciates the opportunity to continue to discuss the many issues associated with the above referenced permit. This letter will serve as a summary of the issues discussed at the Frankfort meeting. Also, as EPA indicated in the meeting, EPA has an outstanding "15-day notice letter" under section 404(c) of the Clean Water Act (CWA). EPA extended the time frame for Central Appalachia Mining (CAM) to provide a response that addresses EPA's concerns. As we discussed in the meeting, EPA would like to have a response to this letter by February 2, 2010, so EPA can determine how to proceed. Also, we are enclosing the summary from the Atlanta meeting of November 9, 2009. We apologize that this was not sent to you earlier.

Avoidance and Minimization - As we discussed, CAM has indicated that it believes it has avoided and minimized to the maximum it can and have an economically viable mine. EPA understands your position, but would like a response to the minimization proposal that Morgan International has provided (copy enclosesd). At this point ther are eight remaining fills, and Morgan International's design has proposed five or six fills while maintaining the same level of coal reserves mined. Not having the geological model for this mining site has prevented EPA and its consult from assessing the practicable number of fills and minimizing associated impacts. CAM agreed during the meeting to provide that information to EPA and Morgan International so we can continue our review. In the interim, EPA would like to hear directly from CAM on the feasibility of further minimization given the information we have provided to you.

In addition EPA would like CAM's response to the use of side-filling as an alternative to valley fills. We first discussed this concept in Atlanta, and John Morgan had placed this information on an FTP site for your access and use. As was discussed at the Frankfort meeting, the state of Kentucky and the Office of Surface Mining agreed that side-fills would meet the existing requirements of state law and could be permitted as long as the resulting fill was stable, As John Morgan indicated, the side fill is actually buttressed against the opposite valley and can be constructed in a stable manner. An added benefit is that by moving the existing stream into a newly created valley floor, this could provide for water quality improvements. We understand that there are other issues

such as engineering design and volumetric issues, but would like CAM to provide a response concerning the feasibility of this design.

Fill Minimization – During the discussion, it was agreed that CAM would modify its design to comply with the fill minimization requirements associated with the recently developed process between the regulatory agencies in Kentucky. EPA recognizes the memorandum of understanding implementing this provision has not been signed by all the agencies at this time and commits to sending a copy of the signed document as soon as it is available. In the interim, Kentucky Department of Natural Resources has indicated, and all parties have agreed, that CAM should assume it will be signed in its current form.

Mitigation - As we discussed at the meeting mitigation, requirements which have been established during the application review would be maintained to eliminate the use of groin ditches for mitigation credit, on site mitigation, conservation easements and the use of in lieu payment for remaining credits for valley fills that are permitted. If the side valley fill is selected as preferred alternative and the constructed channel is provided using appropriate natural stream design, EPA would work with CAM and the Corps of Engineers to determine appropriate mitigation credit for the constructed stream considering replacement value and level of stream function provided by the replacement channel.

Water Quality - There were several issues discussed related to water quality, the focus being specific conductance. EPA reiterated that discharges from the project must comply with ambient water quality standards and any permit issued must show that there is no reasonable potential to cause or contribute to an exceedance of state water quality standards. There was a discussion on specific conductance and what steps could be taken to minimize the discharges of elevated levels. One approach was the side-fill approach, discussed above. Several potential Best Management Practices (BMPs) were discussed that came out of the interagency Pittsburgh meeting. These included further avoiding and minimizing the contact between storm water and overburden and mining areas (i.e., managing water through grading and diversion to reduce the level of pollutants in discharges), compacting disturbed overburden and fill areas more tightly to reduce percolation, using the most appropriate ground cover, and restoring vegetation more quickly. In addition to considering these BMPs, CAM agreed to look into other potential BMPs that could address potential downstream water quality impacts to present to the EPA for consideration.

The group discussed the permitting requirements that Peg-Fork had agreed to, including adaptive management and the potential to shut down if water quality criteria were exceeded in the receiving water body. CAM indicated that it would be difficult for their operation to agree to shut down as their economic model depends on mining all areas identified. CAM understands that extensive monitoring requirements would need to be included in any issued permits. This monitoring would be focused on measuring ambient conditions before mining and developing a trend analysis to act as a bellwether to trigger additional adaptive management to protect downstream water quality. CAM

should provide any adaptive management steps that could be taken if downstream water quality impacts are identified to prevent any violation of water quality standards.

There was also a discussion on the proposed advisory that will recommend a level of specific conductance for ambient waters. CAM expressed concern that focusing on specific conductance without knowing what level and what other factors affected benthic organisms seemed premature. EPA explained that the proposal includes a white paper that looks at these affects and other inter-related factors. EPA committed to sharing this with CAM as soon as it is available.

Once again, we appreciate the opportunity to continue these discussions. If there are any questions concerning this letter, please contact me at (404) 562-9354.

Sincerely,

Thomas C. Welborn

Chief

Wetlands, Coastal and Oceans Branch

Duncan Poved for TCW

**Enclosures** 

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JAN 2 8 2010

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is a follow-up to our previous letter dated December 16, 2009, concerning the proposed Big Branch surface mine project (DA # 2004-1400; KDMRE # 898-0792) in Pike County, Kentucky and our conference call on January 27, 2010. The previous correspondence notified Central Appalachia Mining (CAM) of a required response to provide the Environmental Protection Agency (EPA) Region 4 with the requested information by February 2, 2010. During the conference call, you indicated a need for additional time to complete the Kentucky Fill Placement Optimization Process on the entire project and that you could provide interim products during an extension. Per CAM's request, in order to ensure a quality work product, EPA is granting an extension of thirty (30) days beyond the February 2, 2010, response date to provide more time for review and completion/finalization of the response package.

In order to balance our regulatory responsibility with respect to the timeframes set out in the regulations and the need to fully consider and discuss the forthcoming reports, we have determined that extending the timeframe, in accordance with 40 CFR Part 231, for an additional thirty (30) days to March 4, 2010, is appropriate. We believe that such an extension is suitable to allow CAM to complete their analysis and provide the results of their findings and previously requested information to EPA. This timeframe will allow both organizations to fully consider and discuss CAM's findings and address EPA's concerns. As interim products are available please forward them to EPA to help expedite the final review. We anticipate contacting CAM to set up a meeting to discuss the findings once we have had the opportunity to review the final reports, preferably no later than March 19, 2010.

I appreciate your cooperation during this process. I look forward to the opportunity to meet with you to discuss your findings and any remaining concerns EPA may have.

If you should have any questions, please contact Todd Bowers at (404) 562-9225.

Sincerely,

Thomas C. Welborn

Recude-

Chief

Wetlands, Coastal and Oceans Branch

Cc: Colonel Dana R. Hurst, District Engineer Huntington District, U.S. Army Corps of Engineers Huntington, West Virginia 25701-2070



March 03, 2010

Mr. James Giattina, Director Water Protection Division, Region 4 United States Environmental Protection Agency Atlanta Federal Center 61 Forsyth Street Atlanta, Georgia 30303-8960

Re: CAM Mining LLC

Big Branch Surface Mine KDNR Permit No. 898-0792 USACE ID No. 200401400

Mr. Giattina:

In response to your December 16, 2009 letter regarding the above referenced project, CAM Mining, LLC has provided information to your office relating to three of the issues raised. This information, which was transmitted by e-mail on February 20, 2010, included narratives regarding Avoidance and Minimization of Impacts to Jurisdictional Waters, an Analysis of Side Hill Fills, and the Water Quality Management Plan. The only remaining issue for submittal is Fill Minimization utilizing the "Kentucky Fill Placement Optimization Process".

CAM's consultant, Summit Engineering Inc., has spent considerable time over the past couple of months applying the Fill Placement Optimization Process (KDNR RAM 145) to this project. A narrative regarding the process and several exhibits are included in the attached submittal for your review. Based on the results of the analysis, the Big Branch Surface Mine, as currently proposed, exhibits a significantly lower level of linear feet of stream impact and loss of EIUs than the calculated "optimized values", therefore meeting the requirements of this process.

For your convenience, the attached submittal includes all narratives submitted to date including the Fill Placement Optimization Process.

If you have any questions, please contact me at 606-444-7306.

Sincerely,

Ronald G. Hull, P.E.

Acralel H. Hull

General Manager of Engineering and Planning

CAM Mining LLC

Copies Furnished to:

Ginger Mullins U.S. Army Corps of Engineers 502 Eighth Street Huntington, WV 25701



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March 17, 2010

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is provided to Central Appalachia Mining, LLC (CAM) as a follow up to our last letter dated January 28, 2010, concerning the proposed Big Branch coal mine project (DA # 2004-1400; KDMRE # 898-0792) in Pike County, Kentucky. In our letter, we provided a 30-day extension to CAM to provide the Environmental Protection Agency (EPA) Region 4 with a full report to address our request for additional information and list of concerns developed in our regional headquarters office in Atlanta, GA during the meeting on December 9, 2009.

Most importantly, but not exclusively, EPA requested the completion of Kentucky's Fill Placement Optimization Process per the Reclamation Advisory Memo (RAM) #145 dated December 16, 2009. Additionally we requested that CAM develop a water quality management plan, complete an analysis of side hill fill options for the Big Branch project site, and justify CAM's avoidance and minimization plan. As of March 3, 2010, we have received all the requested reports and analysis from your consultant, Summit Engineering, and my staff is currently reviewing the information contained within the report.

My staff and I appreciate your cooperation and patience during this process. I look forward to the opportunity to meet with you and your consultant to discuss our findings and any remaining concerns. If you have any questions, please contact Todd Bowers at (404) 562-9225, or call me at (404) 562-9470.

Sincerely,

Vafnes D. Giattina

Water Protection Division

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ATLANTA, GEORGIA 30303-8960

April 30, 2010

Mr. Ron Hull Central Appalachia Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Dear Mr. Hull:

This letter is provided to Central Appalachia Mining, LLC (CAM) as a follow up to our last letter dated March 17, 2010, concerning the proposed Big Branch coal mine project (LRH-2004-1400; KDMP #898-0792) in Pike County, Kentucky. In our letter we noted that on March 3, 2010, we had received previously requested reports for the Big Branch project site (a water quality management plan, analysis of side hill fill options, justification of the avoidance and minimization plan, justification of hollow fill locations and a report of the results of the Fill Placement Optimization Process).

My staff is currently reviewing these reports. To aid us in our review we have contracted with CBC Engineers (Hurricane, WV). In order to complete their review, CBC needs additional engineering data not contained in the reports, included but not limited to the mine plan, cross-sections through the back stacks and valley fills, and stability analyses. We hereby request that you authorize your consultant, Summit Engineering, to release any and all data needed by our consultant to complete their review.

My staff and I appreciate your cooperation and patience during this process. I look forward to the opportunity to meet with you and your consultant to discuss our findings and any remaining concerns. If you have any questions, please contact Todd Bowers at (404) 562-9225 or Kevin H. Miller at (404) 562-9435, or call me at (404) 562-9470.

Sincerely,

James D. Giattina

Director

Water Protection Division

cc: Colonel Dana R. Hurst, U.S. Army Corps of Engineers David Rasnick, Summit Engineering Mike Cross, CBC Engineers Brian Topping, EPA, Washington, DC

Internet Address (URL) • http://www.epa.gov

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REGION 4
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ATLANTA, GEORGIA 30303-8960

NOV 2 4 2010

Mr. Ron Hull Central Appalachian Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Subject: Central Appalachian Mining, LLC Big Branch Surface Mine

LRH 2004-1400

Kentucky Division of Mine Permits #898-0792

Dear Mr. Hull:

The U.S. Environmental Protection Agency (EPA), Region 4, has reviewed the information submitted by or on behalf of Central Appalachian Mining (CAM), LLC (formerly Berkeley Energy Corporation) for impacts to jurisdictional waters of the U.S. as a result of proposed surface coal mining activities in several named and unnamed tributaries to Big Branch and Tug Fork near the town of Majestic in Pike County, Kentucky (LRH-2004-1400; KDMP #898-0792). This project was originally advertised as a Public Notice (PN) by the U.S. Army Corps of Engineers (Corps), Huntington District for an Individual Permit on June 13, 2005. That PN advertised the proposed construction of 13 hollow fills (HF) and associated sediment ponds in waters of the U.S. that would have permanently and temporarily impacted approximately 34,520 linear feet (lf) of ephemeral and intermittent streams. In letters to the Huntington Corps District dated July 22, 2005, August 16, 2005, December 21, 2007, and March 23, 2009, EPA expressed concerns over the impacts of CAM's proposed Big Branch Surface Mine Project. To address these concerns, CAM chose to reduce the amount of coal mined from the project thereby reducing the number of HFs and therefore impacts to jurisdictional waters. CAM's current proposed project's design includes the construction of 8 HF and associated sediment ponds in waters of the U.S., resulting in permanent and temporary impacts totaling 22,223 lf of ephemeral and intermittent streams.

In order to compensate for the 22,223 lf of impacts, EPA understands that CAM proposes to perform on-site (3,310 lf) and off-site (10,656 lf) in-kind mitigation (restoration and enhancement) along with in-lieu fees totaling \$2,990,822.

A final report reflecting EPA's Science and Ecosystems Services Division's (SESD) site investigation on June 2-3, 2009, was forwarded to CAM and the Huntington Corps District for review. An independent analysis of this project's Fill Placement Optimization Process (FPOP) per the Kentucky Department for Natural Resource's (KDNR) Reclamation Advisory Memorandum #145 (RAM 145) made by CBC Engineers finalized on September 23, 2010, was also recently forwarded to CAM and the Corps for review.

EPA appreciates CAM's efforts and cooperation during this process which has included discontinuing the use of groin ditches as compensatory mitigation, developing a water quality management plan, an adaptive management plan for water quality and compensatory mitigation, allowing access to the project site for aquatic resource evaluation, and attendance at several meetings and conference calls to address EPA's concerns. CAM has also agreed to implement several best management practices (BMPs) to minimize erosion and sedimentation from disturbed areas, retain existing vegetation to the maximum extent practicable, and amend their mitigation plan to adhere to the 2008 Compensatory Mitigation for the Losses of Aquatic Resources Final Rule (40 CFR Part 230).

# Avoidance and Minimization of Impacts to Aquatic Resources

As stated above, CAM has reduced the proposed mine plan to include the construction of 8 HF consisting of HF 4, 7, 8, 11, 12, 13, 17, and 18. It is understood that CAM chose these fills based on stream quality indices, proximity to the project area, and the need for immediate spoil placement at the start of the mining operation. The current mine plan proposes to excavate 101.6 million cubic yards (MCY) of overburden with a calculated swell volume of 127 MCY, store 43.3 MCY in the 8 HF, and place 83.7 MCY back in the mined area. Based on these volumes, the plan proposes to return 82 percent of the material volume back to the mined area, therefore exceeding the 80 percent requirement of the Kentucky September 2001 Approximate Original Contour policy. CAM conducted an analysis of the project in accordance with RAM 145 in order to determine if the eight proposed HFs in the current mine plan met the requirements of the newly released policy. The analysis, contained in the report entitled, "Fill Placement Optimization Process," dated March 2, 2010, was provided to the EPA several months ago, whereupon it was forwarded to CBC Engineers, an independent contracted firm, for in-depth analysis.

CBC provided their analysis of CAM's most current mine plan adherence to RAM 145, and investigated several other options for CAM to achieve additional avoidance and minimization of impacts to waters of the U.S. According to CBC, the FPOP model prepared by CAM adheres to the guidelines of RAM 145. CBC's FPOP based on CAM's current mine plan at the Big Branch site would allow for permanent impacts of 20,964 lf of stream and the loss of 14,060 Ecological Integrity Units (EIU). This was compared to CAM's current mine plan that contains proposed permanent impacts to 18,833 lf of stream and a resultant loss of 11,664 EIUs.

Additional analysis by CBC regarding additional avoidance of impacts to waters of the U.S. has shown that further reductions in damage to aquatic resources is not practicable based on CAM's proposed project parameters, mineral recovery goals, and Surface Mining Control and Reclamation Act (SMCRA) regulations. Therefore CBC has concluded, with EPA's concurrence, that CAM's current proposed mine plan and impacts to aquatic resources complies with the requirements of RAM 145. Despite the engineering calculation, described above, EPA still has significant remaining environmental concerns regarding this project's impact on water quality.

## Water Quality and Best Management Practices

Scientific literature has increasingly recognized the relationship between discharges from surface coal mining operations and downstream water quality impairments. A 2005 published study, "Evaluation of Ionic Contribution to the Toxicity of a Coal-Mine Effluent Using Ceriodaphnia dubia," by Kennedy, et al., linked impairment of aquatic life to total dissolved solids (TDS) levels. EPA also notes that previous technical reports have recognized the potential detriment to stream biota in headwater streams in the Eastern Kentucky Coal Field correlated with specific conductivity levels above 400 μS/cm (Pond and McMurray, 2002<sup>1</sup>). A 2008 published study, "Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools," by Pond, et al., found evidence indicating that mining activities have subtle to severe impacts on aquatic life and the biological conditions of a stream. A 2010 published study by Pond, "Patterns of Ephemeroptera taxa loss in Appalachian headwater streams (Kentucky, USA)," links conductivity as the most strongly correlated factor to Ephemeroptera abundance in streams impacted by mining and residential development. A draft report by EPA, "The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the Central Appalachian Coalfields," recognizes that surface coal mining causes effects that include habitat loss, water quality impairment, forest fragmentation, and adverse effects on aquatic resources. Finally, another draft report by EPA, "A Field-based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams," recognizes stream-life impacts associated with elevated levels of conductivity.

As part of its permit application, CAM collected baseline water quality data from streams within the project boundaries in the proposed impacted watersheds from June 1999 to August 2000, and reported specific conductance (SC) values ranging from 350 to 711  $\mu$ S/cm. During a macroinvertebrate collection survey of 4 headwater streams (Big Branch, Left Fork Malachi Branch, Daniels Branch, and Shannon Branch) within project boundaries in May 2006, CAM reported SC values ranging from 80 to 260  $\mu$ S/cm. SESD reported similar data in June 2009, and found SC in these same 4 streams to range from 109 to 357  $\mu$ S/cm. Only 1 site evaluated within the project boundary was found to have a higher value; 433  $\mu$ S/cm was found at the headwaters of Swamp Branch, the proposed location of HF #4 and where pre-law mining is believed to have occurred.

Macroinvertebrate Biotic Index (MBI) scores were very similar for both recent surveys, May 2006, and June 2009, and ranged from Fair to Good in the Big Branch, Left Fork Malachi Branch, Daniels Branch, and Shannon Branch watersheds. Additionally, especially where prelaw mining spoil has not damaged the watershed, these streams display water quality and MBI scores very similar to reference streams for the same ecoregion (Ecoregion 69d), as reported by SESD.

In a letter to CAM dated December 16, 2009, EPA indicated that water quality monitoring, macroinvertebrate sampling, and BMP plans should be included as part of the

<sup>&</sup>lt;sup>1</sup> Pond, G.J. and S.E. McMurray. 2002. A Macroinvertebrate Bioassessment Index for Headwater Streams of the Eastern Kentucky Coalfield Region, Kentucky. Kentucky Department for Environmental Protection, Division of Water. Frankfort, KY.

Section 404 permit issued for this project. The plans provided by CAM, dated February 10, 2010, outline specific monitoring points within the project boundaries, chemical constituents of concern to be monitored, macroinvertebrate monitoring locations, chemical and biological sampling frequency, and reporting timeframes. These plans set a SC threshold of  $1000 \,\mu\text{S/cm}$  to trigger remedial actions. EPA prefers using  $500 \,\mu\text{S/cm}$  as a threshold for corrective actions. This value represents best-available scientific information on the relationship between SC levels and aquatic life in central Appalachian streams, as described in the scientific literature referenced above.

Additional improvements must be made to CAM's proposed water quality management and monitoring plan in order to ensure compliance with the 404(b)(1) Guidelines. EPA believes that the following conditions should be incorporated into any final authorization under Section 404 in order to ensure that the discharges will not cause or contribute to a violation of State water quality standards, or cause or contribute to significant degradation of waters of the U.S. consistent with the Guidelines (40 C.F.R. §§ 230.10(b) and (c)). Primarily, these practices should include all efforts to identify and then isolate TDS and/or sulfate-producing materials. The proper implementation of such efforts has been shown to reduce elevated SC in streams draining a Magoffin County, Kentucky surface coal mine by as much as 75 percent over elevated background conditions in re-mined valleys (Dr. R.C. Warner, personal communication). EPA notes that the BMPs described below relate directly to fill activities in waters of the U.S. that are likely to have impacts on downstream water quality. Such practices should include the following:

- Identification via field-based testing of TDS and/or sulfate-producing materials that must then be isolated;
- Implementation of HF design alternatives that reduce infiltration (e.g. compact surface lifts, crown the fill surface) and controls flow through the fill to avoid contact time between water and reactive materials (i.e. TDS and/or sulfate producing geologic strata); and
- Use of only low-reactive or non-reactive durable rock to construct underdrains and place only these same materials adjacent to the sides of the highwalls and HFs.

EPA has recently initiated coordination with the KDNR to better understand the SMCRA regulatory ramifications of altering approved HF construction methodology to implement the above referenced practices, where applicable. KDNR has been both receptive to permit modifications aimed at reducing the potential for adverse water quality, and they have pledged to work cooperatively to identify the most expeditious means of reviewing such modifications when necessary. EPA recommends that CAM seek out alternatives similar to the methods described above as possible strategies towards limiting adverse effects to water quality downstream of the Big Branch surface mine project.

## Adaptive Management and HF Construction Sequencing

As referenced above, the permit should require development of an approved AMP, based on robust water quality and biological monitoring to identify negative trends in these parameters which would be triggered by the recommended threshold conditions noted above. The AMP

would include specific remedial actions that could be taken to remedy any trends of concern within the watershed of the proposed project. EPA also believes the AMP should include a phased approach, such that increased impacts to downstream waters would trigger increased remedial actions until such time as water quality goals are met and the next HF would be authorized.

We look forward to discussing the need for appropriate BMPs, water quality triggers, and an AMP to help protect water quality and aquatic biology within this proposed project. The conditions described above have been adopted within other Clean Water Act Section 404 permits issued in Tennessee, West Virginia, and Ohio pursuant to the Enhanced Coordination Procedures for surface coal mining applications as detailed in the June 11, 2009, Memorandum of Understanding among the U.S. Department of Army, U.S. Department of the Interior and the U.S. Environmental Protection Agency Implementing the Interagency Plan on Appalachian Surface Coal Mining.

EPA supports HF construction sequencing as a viable alternative and a method of adaptive management for the proposed project. Sequencing would involve initial construction of a single or small subset of proposed HFs, followed by monitoring of the water quality and biology downstream of these fills before permitting the authorization of additional fill construction. The Corps has permitted surface coal projects using this sequencing approach to ensure protection of water quality and EPA is willing to discuss examples of how this approach has been employed within other projects.

CAM should explore the appropriateness of HF sequencing for this project and identify how the mining plan could include such an approach. The uncertainty of the current BMPs to address water quality is extremely problematic and without the demonstration of positive water quality trends resulting from fill activities, sequencing presents the most reasonable way to proceed with this project. EPA would like to discuss whether such data exist to inform our evaluation of a sequenced approach.

## **Environmental Justice**

Consistent with Executive Order 12898 entitled "Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-income Populations" and the accompanying Presidential Memorandum, EPA recommends that the Corps' Section of 404(b)(1) Guidelines and their National Environmental Protection Act analysis include the potential for disproportionately high and adverse effects on low-income or minority populations in the area. Specifically, a characterization of the economic status of residents near the site and the conditions they face including any effects relating to the proximity of the blasting zone, location of discharges of fill material, truck traffic, noise, fugitive dust, and resource loss needs to be conducted to adequately assess the potential impact to EJ communities. Additional information is also needed concerning sources of drinking water for the affected populations (including municipal water supplies and private sources of drinking water including streams and/or wells). EPA also recommends that you take steps to ensure meaningful engagement of affected communities within the effective range of impacts from the project site.

## Conclusion

EPA appreciates CAM's efforts and cooperation to discuss the adoption of certain BMPs into their proposed mining plan. We believe that additional considerations for the protection of water quality is essential to this project. Without these considerations, the proposed project may have unacceptable adverse impacts and EPA's 404(c) action may continue to be pursued.

I want to thank you and your staff for your continued cooperation and willingness to address our issues. We anticipate and look forward to working closely with you as the project conditions are finalized. If you have any questions, please call me at (404) 562-9470 or Todd Bowers of my staff at (404) 562-9225.

Sincerely,

James D. Giattina
Director

Brian Topping, EPA Headquarters, Washington DC cc: William James, USACE Headquarters, Washington DC Ginger Mullins, Huntington District, Huntington, WV Joe Blackburn, Office of Surface Mining, Lexington, KY Lee Andrews, U.S. Fish and Wildlife Service, Frankfort, KY Carl Campbell, Kentucky Department of Natural Resources, Frankfort, KY Bruce Scott, Kentucky Department of Environmental Protection, Frankfort, KY Sandy Gruzensky, Kentucky Division of Water, Frankfort, KY Phillip Elswick, Summit Engineering, Pikeville, KY Danita LaSage, Kentucky Environment and Energy Cabinet, Frankfort, KY

To:

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December 17, 2010

Mr. Ron Hull Central Appalachian Mining, LLC 265 Hambley Boulevard Pikeville, Kentucky 41501

Subject: Central Appalachian Mining, LLC Big Branch Surface Mine

LRH 2004-1400

Kentucky Division of Mine Permits #898-0792

Dear Mr. Hull:

This letter serves as a follow-up to the discussions held at the offices of Summit Engineering on November 29, 2010, between the U.S. Environmental Protection Agency (EPA) Region 4, the U.S. Army Corps of Engineering Huntington District (Corps), Central Appalachian Mining (CAM), and Summit Engineering. At that meeting you requested that we provide a summary of the meeting and follow up actions. Discussion at the meeting included the review of recent reports that have been completed by EPA and its contractors which support the design CAM has submitted to EPA. These reports support CAM's compliance with the Kentucky Fill Placement Optimization Process to minimize proposed impacts to waters of the U.S. We also discussed the use of Best Management Practices (BMPs) to reduce the potential for water quality impacts and those practices that are being developed to reduce conductivity levels during and post-mining. We have included in this letter some of the recommended BMPs as you requested. We also discussed briefly how environmental justice issues are addressed through the mining permit process by the Kentucky Department of Natural Resources (KDNR), that a blasting survey will be conducted prior to the start of mining to ensure protection of surrounding properties, and if problems are encountered during mining, the process KDNR will use to address these complaints.

EPA appreciates CAM's continued efforts and cooperation during this process which has included discontinuing the use of groin ditches as compensatory mitigation credit, developing a water quality management plan, an Adaptive Management Plan (AMP) for water quality and compensatory mitigation, allowing access to the project site for aquatic resource evaluation, addressing environmental justice issues adjacent to the project site, and attendance at several meetings and conference calls to address EPA's concerns. CAM has also agreed to investigate and implement several BMPs to minimize erosion and sedimentation from disturbed areas, retain existing vegetation to the maximum extent practicable, and amend their compensatory mitigation plan to adhere to the 2008 Compensatory Mitigation for the Losses of Aquatic Resources Final Rule (40 CFR Part 230). However, as it currently stands, EPA continues to believe the project

may result in unacceptable adverse effects on the water quality and wildlife on and off-site due to water quality and adaptive management concerns.

### Water Quality and Best Management Practices

In a letter to CAM dated December 16, 2009, EPA indicated that water quality monitoring, benthic macroinvertebrate sampling, and BMP plans would need to be included as part of any Section 404 permit issued for this project. The plans provided in a response by CAM, dated February 10, 2010, outline specific monitoring points within the project boundaries, chemical constituents of concern to be monitored, macroinvertebrate monitoring locations, chemical and biological sampling frequency, and reporting timeframes. Also included were CAM's BMP plan to protect the quality of downstream aquatic resources, and an AMP to provide a process for addressing the incorporation of new information into the monitoring and maintenance strategy. These plans set a specific conductivity (SC) threshold of  $1000 \,\mu\text{S/cm}$  to trigger remedial actions. As stated in our previous correspondence and during recent discussions, EPA is recommending  $500 \,\mu\text{S/cm}$  as a threshold for corrective actions and, or implementation of additional BMPs. This value represents best-available scientific information on the relationship between SC levels and aquatic life in central Appalachian streams as described in the scientific literature referenced in previous letters.

Additional improvements must be made to CAM's proposed water quality management and monitoring plan in order to ensure compliance with the Section 404(b)(1) Guidelines (Guidelines), and prevent unacceptable adverse effects to water quality and wildlife. EPA believes that the following conditions would need to be incorporated into any final authorization under Section 404 in order to ensure that the discharges will not cause or contribute to a violation of State water quality standards, or cause or contribute to significant degradation of waters of the U.S. consistent with the Guidelines (40 CFR§230.10(b) and (c)) or cause unacceptable adverse effects. Primarily, these practices should include all efforts to identify and then isolate total dissolved solids (TDS) and, or sulfate producing materials, which are believed to contribute directly to SC in central Appalachian headwaters. The proper implementation of such efforts has been shown to reduce elevated SC in streams draining a Magoffin County, Kentucky surface coal mine by as much as 75 percent over elevated background conditions in re-mined valleys (Dr. R.C. Warner, personal communication). EPA notes that the BMPs described below relate directly to fill activities in waters of the U.S. that are likely to have impacts on downstream water quality. Such practices and methods should include, but are not limited to, the following:

- Implementation of hollow fill design alternatives that reduce infiltration (e.g. compact surface lifts, crown the fill surface, synthetic caps or liners, etc);
- Identification via field-based testing of TDS and, or sulfate-producing materials that must then be isolated:
- Implementing alternative designs to bypass as much drainage water around or under the bulk of overburden if it has high TDS leaching potential;
- Implementing a hollow fill design alternative that reduces surface area disturbance (such as contemporaneous reclamation) and allow for a sequenced fill construction approach;

- Implementation of an enhanced storm water drainage control on reclaimed mine benches by using a weep berm/forest-passive treatment system to diffuse discharges to adjacent forested landscape;
- Constructing hollow fill underdrains using low-reactive, durable rock wrapped in filter fabric to prevent clogging of the underdrain;
- Construction of *in-situ* passive treatment drains;
- Strict adherence to progressive clearing and grubbing, as required by the Surface Mining Control and Reclamation Act (SMCRA);
- Implementing the Forest Reclamation Approach (FRA) on the face of hollow fills and backfill areas as practicable to increase evapotranspiration and minimize infiltration through the fill. The FRA includes: selecting the best available growth medium, minimizing compaction of the upper layer of soil to allow for root penetration, selecting appropriate native tree species assemblages, using compatible temporary grass cover, and using proper tree planting techniques.
- Using approved and effective chemical flocculants designed specifically to reduce Total Suspended Solids, TDS/SC in sediment control structures;
- Aeration of sediment ponds may be used, if necessary and practicable, to facilitate precipitation and settling;
- Using a floating siphon system to decant the cleanest water from sediment ponds that discharge to receiving streams;
- Stream construction/reconstruction/restoration using natural channel design techniques;
- Utilize pre-oxidized and weathered strata wherever possible for any surface in direct contact with runoff and drainage waters;
- Inspection of sediment and erosion control measures by a qualified individual at least twice per month and after every rainfall exceeding 0.5 inches in a 24 hour period (as measured at the project site) to ensure the structures and measures are functioning properly and to identify any required maintenance and/or subsequent corrective action if necessary.

EPA has recently initiated coordination with KDNR to better understand SMCRA regulatory ramifications of altering approved hollow fill construction methodology to implement the above referenced practices, where applicable. KDNR has been receptive to permit modifications aimed at reducing the potential for adverse water quality and they have pledged to work cooperatively to identify the most expeditious means of reviewing such modifications when necessary. EPA recommends that CAM seek alternatives similar to the methods described above as possible strategies towards limiting adverse effects to water quality downstream of the Big Branch surface mine project.

## Adaptive Management and Hollow Fill Construction Sequencing

As referenced above, in order to avoid unacceptable adverse effects to water quality and wildlife, this project would need to include an approved AMP, based on water quality and biological monitoring to identify trends in these parameters that indicate water quality impairment. The recommended trigger is a SC threshold of 500  $\mu$ S/cm. The AMP should include specific remedial actions that will be taken to remedy any trends of concern within the

watersheds of the proposed project. EPA also believes the AMP should include a phased approach, such that increased impacts to downstream waters would trigger additional remedial actions or BMPs until such time as water quality goals are met and the next hollow fill or subset of hollow fills would be authorized.

As stated in previous correspondence, EPA supports hollow fill construction sequencing as a viable alternative and a method of adaptive management for the proposed project. Sequencing would involve initial construction of a single or small subset of proposed hollow fills, followed by monitoring of the water quality and biology downstream of these fills before authorizing the construction of additional fills. The Corps has permitted surface coal projects using this sequencing approach to ensure protection of water quality and EPA remains willing to discuss examples of how this approach has been employed within other projects.

CAM should explore the appropriateness of hollow fill sequencing for this project, identify how the mining plan could include such an approach, or provide reasons why sequencing of hollow fill construction would not be practicable. The uncertainty of the current BMPs to address water quality is extremely problematic and without the demonstration of positive water quality trends resulting from fill activities, sequencing the project presents a viable way to avoid unacceptable adverse effects to water quality and wildlife for this project.

### Conclusion

While EPA appreciates CAM's efforts and cooperation to discuss the adoption of certain BMPs into their proposed mining plan, we believe that the CAM should incorporate further methods. The absence of these BMPs would potentially render this permit a candidate for further review under the Clean Water Act Section 404(c) given the nature and extent of anticipated unacceptable adverse impacts

I want to thank you and your staff for your continued cooperation and willingness to address our issues. We anticipate and look forward to continuing to work closely with you. If you have any questions, please call me at (404) 562-9354 or Todd Bowers of my staff at (404) 562-9225.

Sincerely,

Thomas C. Welborn

Chief

Wetlands, Coastal and Oceans Branch

cc:

Mr. Brian Topping, EPA Headquarters

Mr. William James, USACE Headquarters

Ms. Ginger Mullins, Huntington District

Mr. Joe Blackburn, Office of Surface Mining

Mr. Lee Andrews, U.S. Fish and Wildlife Service

Mr. Carl Campbell, Kentucky Department of Natural Resources

Mr. Bruce Scott, Kentucky Department of Environmental Protection

Ms. Sandy Gruzensky, Kentucky Division of Water

Mr. Phillip Elswick, Summit Engineering

Ms. Danita LaSage, Kentucky Environment and Energy Cabinet

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July 7, 2011

Todd Bowers U.S. EPA Region 4 Water Protection Division 61 Forsyth Street, SW Atlanta, GA 30303-8960

RE:

CAM Mining, LLC

KDNR Permit No. 898-0792 USACE ID No. 200401400

Mr. Bowers:

Thank you for forwarding the Final Report of the Water Quality Study prepared by the U.S. EPA Region 4 Science and Ecosystem Support Division for the above referenced project as well as your information requests.

A review of the Water Quality Study findings indicates that U.S. EPA has compared the water chemistry data to Kentucky's domestic water supply criteria. This is an inappropriate comparison and establishes a bias in the report as the domestic water supply criteria are only applicable at the point of water withdrawal for domestic use. The waters studied in this report are not used for domestic water supplies and are not located in the vicinity of a water intake. In fact, the nearest downstream public water intake is located on the Tug Fork approximately 60 miles downstream in Martin County, KY.

Further, the report states in multiple locations that various chemical parameters in the discharges exceeded the standards. While the report indicates that the sampling stations are not located immediately near drinking water intakes, the tone of the document suggests poor water quality. An appropriate comparison would be made using the Acute Warm Water Aquatic Habitat standards. Had this comparison been made, none of the analyzed parameters would have exceeded applicable water quality standards.

CAM feels the report should be re-written utilizing the appropriate water quality standards to ensure that misleading analysis is not represented.

In your e-mail accompanying the Water Quality Study report, you requested information on four issues. I have provided information relative to your requests below.

1. Digital Copy of Mining and Reclamation Plan (MRP) Map

A digital copy of the Big Branch Surface Mine MRP map was provided to Ross Geredien following his e-mail request of June 14, 2011.

#### 2. Fill Placement and Optimization Process (FPOP)

The FPOP analysis completed for the Big Branch Surface Mine was not revised in response to the analysis performed by CBC Engineers & Associates, Ltd. The CBC analysis revealed that the Target Fill Volume had not been correctly calculated. The Target Fill Volume is only required to compare the actual mine design to the FPOP design. The actual mine design cannot have a fill volume exceeding 110% of the Target Fill Volume. CBC concluded on page 15 of its report that, "The fill volume in Mine Plan #2 [actual mine design] is less than the target fill volume predicted by the FPOP model. Based on the above information, CAM/Summit's proposed Mine Plan #2 complies with the requirements of RAM #145."

Your e-mail suggests that this error would affect the amount of spoil storage required on site and change the number or size of valley fills. The CBC report addressed this concern as the error was corrected and the mine plan evaluated in light of the correct target fill volume. Even with the reduction in the target fill volume, CAM's proposed mine plan complied with the requirements of RAM 145. Further, EPA in its November 24, 2010 letter stated, "... CBC has concluded, with EPA's concurrence, that CAM's current proposed mine plan and impacts to aquatic resources complies with the requirements of RAM 145." EPA's concurrence was later confirmed in the November 29, 2010 meeting held in Pikeville, KY.

# CAM considers the FPOP study completed and no further considerations or modifications are required.

#### 3. Reduction of Coal Recovery

In an effort to reduce impacts to jurisdictional waters, CAM proposed eliminating a portion of the coal recovery associated with this project. In order to do so, area mining in the Lower Elkhorn seam, mainly below the mining areas of the Alma Seams, was eliminated in areas of previous deep mining. However, CAM has chosen to continue contour mining of this seam to recover the unmined reserves along the outcrop. Because of the various coal seams that will be mined as part of this project, the surface acreage of the mining area remains unchanged. The volume of excess overburden generated as a result of the project is reduced eliminating the need for additional hollow fills, but the surface acreage of the mining areas remains unchanged.

#### 4. Mining Sequence

CAM is not required by SMCRA to produce a mining sequence for the Big Branch Surface Mine. However, a general mine sequence was provided to the U.S. Army Corps of Engineers, Huntington District in April 2009 as part of justification for the proposed hollow fills. The sequence as stated in your e-mail is accurate. I have resent this submitted plan as part of this letter.

Mining sequence in KYDNR permits facilitates variations in the mine plan to enable mining companies the ability to operate efficiently while achieving the contemporaneous reclamation requirements. Due to balancing of mine ratios, coal quality blending, and handling of overburden material, mine plans (sequence) are required to remain fluid, but within the regulated permitted limitations.

CAM submitted to the EPA and USACE on February 11, 2011 our "Fill Sequencing Discussion" as requested by the EPA to support our positions on this item. No comments from the EPA have been received on this submittal.

CAM has responded to all of the EPA questions and has been extremely cooperative in the multiple water quality studies of the project area. The additional EPA analysis has greatly extended the 404c process period, and CAM deems that the results of the additional EPA analysis once again have verified the original analysis/data as presented in the original USACE 404 application. Over the last two year period of this 404c process, commencing on April 28, 2009, CAM has not received any findings from the EPA which justified the initiation of this 404c action (unacceptable adverse effects) which stopped the acceptance of the original USACE proffered 404 permit.

As the new EPA Water Quality Study presents, low conductivity does not represent a high benthic population (biological community), which further substantiates CAM's position that conductivity limits is not the measurement to be utilized, and should be based on a benthic monitoring program as proposed by CAM in our last submittals. No comments from the EPA have been received concerning our February 4, 2011 submittal of the "Revised Water Quality Management Plan".

CAM requests that the EPA summarizes the outstanding legal/permitting issues which supports the 404c action so an expedient resolution can be achieved.

If you have any questions or require additional information, please contact me at 606-444-7306.

Sincerely,

Ronald G. Hull, P.E.

General Manager of Engineering and Planning

Ronald & Hull

**CAM Mining LLC** 

c: Philip Elswick, P.E. – Summit Engineering Ginger Mullins – U.S. Army Corps of Engineers, Huntington District

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September 12, 2011

Ginger Mullins - Chief, Regulatory Branch U.S. Army Corps of Engineers, Huntington District 502 Eighth Street Huntington, WV 25701

Jim Giattina - Director, Water Protection Division U.S. Environmental Protection Agency, Region 4 Sam Nunn Atlanta Federal Center 61 Forsyth Street SW Atlanta, GA 30303-

Re:

CAM Mining LLC

KYDNR Permit No. 898-0792

Pending 404 Permit LRH-2004-01400

#### To Each:

This letter is submitted to inform the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency that CAM Mining LLC has sold its Kentucky surface mining permit numbered 898-0792 (Big Branch) in its entirety to Revelation Energy, Inc. This includes all air and water quality permits, either existing and/or pending. At present CAM Mining LLC is in negotiations with Region 4 of the U.S. Environmental Protection Agency to obtain an Individual 404 Permit for this proposed surface mining operation. As part of that negotiation, a meeting has been scheduled to be held at the Region 4 headquarters in Atlanta, GA to discuss the pending 404 permit for the proposed Big Branch surface operation.

Please be notified that, as of now, Revelation Energy, Inc. will be replacing CAM Mining LLC as primary negotiator on any items relating to this proposed permit. Should you have any questions concerning this change in responsibilities, please contact me at your convenience.

Sincerely,

Ronald G. Hull

General Manager, Engineering and Planning

Ronald H. Hull

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Jeff Hoops, President Revelation Energy, LLC 1051 Main Street Milton, WV 25541

April 2, 2012

Mr. James D. Giattina
Director, Water Protection Division
United States Environmental Protection Agency
Sam Nunn Federal Center
61 Forsythe Street, S.W.
Atlanta, GA 30303-8960

#### Dear Mr. Giattina:

First of all I would like to thank you and your entire staff at the EPA for your prompt attention and handling of our situation in Pike County, Kentucky. As you know we acquired this permit from CAM in September of 2011, met with you in Atlanta in October and since that time have worked with you and your consultant to find a solution that provides us the spoil storage place necessary while minimizing the impact to streams in the area. We worked with John Morgan and his staff to accomplish this objective over this past couple of months and believe based on these efforts have found a solution that will allow this project to move forward while reducing the stream impact by nearly 50% over the original plan.

It is our understanding that we have reached a three (3) valley fill solution that will allow us to immediately construct valley fills #13 and #18 with conditional approval of a third fill, #8 that may be constructed once we have demonstrated that:

- The project is stil in compliance with the Kentucky RAM145 guidance, and
- The water quality from the first two fills will meet water quality standards to be defined in an agreed adaptive plan consistent with previous plans that have been adopted by others in the area for a minimum period of 6 months.

Also, attached please find the revised Kentucky MRP map illustrating our commitment to modify the existing permit to eliminate the valley fills as well as the design changes to the three (3) approved fills. This modification is in process and final approval is expected in July of 2012.

Mr. Giattina April 3, 2012 Page 2

As a result of this agreement and our commitment to modify the existing permit, in the agreed manner, we respectfully request that EPA suspend the 404 (c) action in order to allow Revelation to submit a revised permit application, consistent with the two fills and the option for a third. Other proposed actions include meeting with the Corps and EPA to reach agreement on the details of the adaptive management plan and mitigation plan. Based on agreement among the parties we understand that EPA would formally withdraw the 404(c) and support issuance of a revised permit. In closing, I once again want to think you, John Morgan and the entire team at EPA for your handling of this matter. We appreciate and understand your objectives and believe that together we have demonstrated a balance can be reached in protecting the environment while responsibly developing our valuable resources. Please review this letter and advise as to the steps necessary to bring this to a final resolution.

Sincerely,

deff Hoops President



REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 3 1 2012

Mr. Jeff Hoops President Revelation Energy, LLC 1501 Main Street Milton, West Virginia 25541

Subject: Revelation Energy, LLC, Big Branch Surface Mine - Pike County, KY

U.S Army Corps of Engineers Public Notice LRH-2004-1400 Kentucky Department of Natural Resources Permit # 898-0792

Dear Mr. Hoops:

Thank you for your April 2, 2012, letter to me regarding your revised mining proposal for the Big Branch Surface Mine in Pike County, Kentucky. We appreciate Revelation Energy's willingness to work with us to help reduce the impacts of your proposed project to waters of the United States.

As your letter describes, your chosen configuration has reduced impacts to waters of the United States by 41 percent, or more than 9,000 linear feet and reduced the number of hollow fills from eight to three, in a way that permits the third fill only when water quality standards are met below the first two.

Enclosed you will find the EPA's letter to the U.S. Army Corps of Engineers (Corps), Huntington District, memorializing the tentative agreement we have with you and encouraging the Corps to resume processing your Section 404 permit. As described in that letter, we have several areas in which we would like to continue working with you and the Corps to address potential concerns with water quality and environmental impacts, including compensatory mitigation, Best Management Practices, sequenced construction of the third valley fill and monitoring. We are interested to meet with you and the Corps, the lead agency responsible for Section 404 permitting, at your convenience to develop a permit consistent with your proposal and that meets other relevant requirements of the agencies' regulations.

Thank you again for your letter and for your effective work with us. Please feel free to contact Mr. Jim Giattina at (404) 562-9470 or Mr. Todd Bowers at (404) 562-9225 if you have any questions or concerns as we move forward.

Sincerely,

Gwendol yn Leus Flemey
Gwendolyn Keyes Fleming
Regional Administrator

Enclosure

cc: Colonel Peterson, District Engineer

U.S. Army Corps of Engineers, Huntington District

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REGION 4
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61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 3 1 2012

Colonel Robert D. Peterson District Commander U.S. Army Corps of Engineers, Huntington District 502 Eighth Street Huntington, West Virginia 25701

Subject: Revelation Energy, LLC, Big Branch Surface Mine - Pike County, KY

U.S Army Corps of Engineers Public Notice LRH-2004-1400 Kentucky Department of Natural Resources Permit # 898-0792

#### Dear Colonel Peterson:

The U.S. Environmental Protection Agency, Region 4, continues to work closely with Revelation Energy, LLC (Revelation) to identify cost effective and practicable options for reducing water quality and other environmental impacts from the proposed Big Branch Surface Mine. We greatly appreciate Revelation's work with the EPA to examine mine design alternatives that maintain coal recovery and reduce adverse impacts to the aquatic resources associated with the mining operation.

As a result of our coordination with Revelation, the company has recently proposed a revised mine plan that would reduce the number of hollow fills from eight to three, reducing stream impacts to a maximum of 13,140 linear feet. We would like to work with the U.S. Army of Corps of Engineers and Revelation to move forward with processing a revised Clean Water Act Section 404 permit for the Big Branch mine consistent with Revelation's proposal and the associated 41 percent reduction in stream impacts. During this review, the EPA will not be taking further action on its Section 404(c) review of the Big Branch mine. We look forward to working with the Corps in its role as the lead federal permit agency, and Revelation, to develop a permit consistent with the company's proposal and that meets other relevant requirements of the agencies' regulations.

The EPA and Revelation have discussed additional provisions that, if incorporated by the Corps into a Section 404 permit for the project, would further address concerns with water quality and environmental issues associated with the mine, including mitigation, Best Management Practices, sequenced construction of the third valley fill and monitoring. We anticipate being able to respond to these issues in a manner that is consistent with the Corps' current permitting practice, ultimately providing a basis for the EPA to formally withdraw our 404(c) action and in turn allowing the Corps to complete and to issue a Section 404 permit for this project.

The EPA looks forward to working closely with you and your staff towards a final permit decision on the Big Branch surface mine. Please feel free to contact me personally with any questions. Mr. Jim Giattina at (404) 562-9470 or Mr. Todd Bowers of his staff at (404) 562-9225 are also available to coordinate with you and your staff as the permit process moves forward.

Sincerely,

Swendolyn Keyes Fleming

Gwendolyn Keyes Fleming

Regional Administrator

cc: Revelation Energy, LLC.



REGION 4
ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8960

SEP - 5 2013

Lt. Colonel William Redding
District Commander
U.S. Army Corps of Engineers
Huntington District
502 Eight Street
Huntington, West Virginia 25701

Subject: Revelation Energy Inc., - Big Branch Surface Mine - Pike County, Kentucky

U.S. Army Corps of Engineers DA# LRL-2012-1091

Kentucky Department of Natural Resources Permit # 898-0894 AM#1

Dear Lt. Colonel Redding:

I am writing regarding the proposed Big Branch Surface Mine in Pike County, Kentucky. The U.S. Environmental Protection Agency Region 4, previously sent a letter to the U.S. Army Corps of Engineers (Corps) Huntington District pursuant to 40 CFR §231.3 raising concerns about potential adverse environmental impacts associated with the proposed mine. The Huntington District subsequently administratively withdrew the Department of the Army (DA) permit application for the Big Branch Mine and responsibility for the review of the project was later transferred to the Louisville District. Our staff worked with representatives of the mine operator, Revelation Energy, to identify changes to the project that would significantly reduce anticipated impacts to waters of the United States. Revelation Energy indicated its intent to submit a new DA permit application to the Louisville District that reflects these changes.

Given the current circumstances, the EPA withdraws its letter regarding the now-inactive DA permit application for the Big Branch Mine. We look forward to the opportunity to review the new permit application upon its submittal to the Corps. We greatly appreciate the work of your staff and representatives of Revelation Energy to improve the design of the Big Branch Mine and to reduce anticipated impacts.

Thank you again for your work on this issue. Please feel free to contact me or Mr. James Giattina at (404) 562-9345 if you have any questions.

Sincerely.

A. Stanley Meiburg

Acting Regional Administrator

cc: Colonel Luke Leonard, Louisville District

Mr. Jeff Hoops, Revelation Energy, Inc.